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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,150	03/03/2004	Yossi Oulu	200701128-4	4847

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

COULTER, KENNETH R

ART UNIT	PAPER NUMBER
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2454

NOTIFICATION DATE	DELIVERY MODE
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01/26/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/792,150	Applicant(s) OULU ET AL.	
	Examiner Kenneth R. Coulter	Art Unit 2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hind et al. (U.S. Pat. Pub. No. 2004/0054695) (Problem Determination Method, System and Program Product) in view of Morshed et al. (U.S. Pat. No. 6,721,941) (Collection of Timing and Coverage Data Through a Debugging Interface).

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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1.1 Regarding claim 1, Hind discloses a method of instrumenting Java components installed on an application server in order to enable the Java components to be monitored, the method comprising:

adding a patch to a class loader class of a Java virtual machine installed on the application server, wherein the patch causes the class loader class to pass Java components to an instrumentation component when said Java components are loaded by the Java virtual machine (Figs. 3, 5; Abstract “**inserting** compiled problem determination **probes into program classes**”; paragraphs 36, 38);

receiving, from a patched version of said class loader class, code of a Java component to be loaded by the Java virtual machine (Figs. 3, 5; Abstract; paragraph 38); and

with the instrumentation component, instrumenting said code of the Java component (Figs. 3, 5; Abstract “Once the probes have been inserted, **the classes will be run and trace data will be generated.**”; paragraph 38 “**inserting problem determination probes**”).

However, Hind does not **explicitly** disclose adding functionality for tracking execution times.

Morshed teaches adding functionality for tracking execution times (Abstract “gathering execution information”; col. 8, lines 16 – 28 “run time instrumentation routines ...”).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the tracking of execution times by Morshed in the Hind reference in order to accurately trace data with the inserted probes.

Paragraph 38 in Hind

The present invention addresses the issues with related art systems by providing a scheme for **inserting problem determination probes** into program classes while the subject system is running. Specifically, under the present invention, the problem determination **probes are injected into the runtime** of an object-oriented execution environment of a customer's system that interprets and/or incrementally compiles an intermediate virtualized instruction representation of that environment's object logic. One example of such an environment is JAVA where the intermediate virtual instructions resulting from compilation of source instructions are known as "bytecodes," which at run-time are loaded into a **Java Virtual Machine (JVM) by a class loader**. Once loaded, the bytecodes are directly interpreted and/or incrementally compiled by a just-in-time (JIT) compiler into native code for execution. It should be understood, however, that although JAVA terminology will be used in the following description, the teachings described herein could be applied in any environment.

1.2 Per claim 2, Hind teaches the method of claim 1, wherein instrumenting said code comprises adding calls to each of a plurality of methods of the Java component, to thereby provide functionality for monitoring execution times of said methods (Figs. 3, 5; Abstract; paragraphs 10, 38).

1.3 Regarding claim 3, Hind discloses the method of claim 1, wherein instrumenting said code comprises adding functionality for detecting when the Java component is invoked by a colored transaction request message (Figs. 3, 5; paragraph 44 "A typical type of probe point is a print statement that will cause some form of trace data to be printed to log database 64.").

1.4 Per claim 4, Hind teaches the method of claim 1, wherein instrumenting said code comprises adding functionality for reporting transaction identifiers of transactions that invoke the Java component, to thereby allow said execution times to be associated with transactions to which they correspond (Figs. 3, 5; Abstract; paragraph 38).

1.5 Regarding claim 5, Hind does not explicitly disclose generating a breakdown report for the average amount of time that a transaction was processed by servlets. Morshed discloses composing “various statistics for a distributed application.” (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the statistical computation of Morshed into Hind in order to provide more relevant data with which to judge the system.

1.6 Per claims 6 – 18, the combination of Hind and Morshed disclose the specifics regarding breakdown reports, response times, load times, and interactive reports.

Response to Arguments

Applicant's arguments filed 10/8/09 have been fully considered but they are not persuasive.

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Applicant argues that “nothing in Hind or Morshed teaches or suggests that the probes are used to track execution times, as set forth in claim 1.”

Examiner disagrees.

Morshed teaches adding functionality for tracking execution times (Abstract “**gathering execution information**”; col. 8, lines 16 – 28 “run time instrumentation routines ...”).

Execution information inherently includes execution times.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth R. Coulter whose telephone number is 571 272-3879. The examiner can normally be reached on M - F, 7:30 am - 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenneth R Coulter/
Primary Examiner, Art Unit 2454

/KRC/